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June 24, 2016

**VIA ELECTRONIC FILING**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

**Re: RM-11738**  
***Ex Parte Letter***

Dear Ms. Dortch:

The Enterprise Wireless Alliance (“EWA”) and pdvWireless, Inc. (previously Pacific DataVision, Inc.) (“PDV”) must correct certain “facts” in the June 22, 2016 *ex parte* presentation submitted by the Critical Infrastructure Coalition (“CIC”) (See Attachment A).

As an initial matter, it is important to understand the background of this proceeding. For more than a decade the American Petroleum Institute (“API”) and the Utilities Telecom Council (“UTC”), as representatives of the Critical Infrastructure Industry (“CII”) community, argued to the Federal Communications Commission (“FCC”) that CII entities needed a broadband allocation dedicated to their specific requirements. Presumably their preference would have been a CII broadband allocation outside of the auction process, but no such allocation has been authorized or is under active consideration at the FCC.

In early 2014, PDV discussed with API, UTC, and EWA the possibility of realigning the 900 MHz band to create a 3/3 MHz broadband allocation to serve CII and other business enterprise requirements, while retaining a 2/2 MHz segment for licensees that wished to continue to operate narrowband systems. The 3/3 MHz to be dedicated to that purpose was Sprint’s geographic 900 MHz spectrum purchased at auction approximately 20 years ago, plus site-based spectrum purchased from incumbents by Sprint, which spectrum had been used intensively in Sprint’s iDEN network for several decades. The decision to deactivate that network presented an opportunity to repurpose the spectrum for deployment of an even more advanced technology. At that time, consistent with their repeated requests for dedicated broadband spectrum, API, UTC, and EWA supported an FCC undertaking to consider this 900 MHz “spectrum development opportunity.”<sup>1</sup> Shortly thereafter, PDV purchased Sprint’s 900 MHz spectrum and together with EWA filed the instant Petition for Rulemaking.

That Petition has been pending for some 20 months. The record reflects differing opinions about a number of the issues it raises, including those identified by CIC. This is the case whenever a band repurposing is proposed: incumbents almost invariably prefer the status quo. But the FCC’s

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<sup>1</sup> See Attachment B.

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public interest analysis weighs not only the number of dissenting incumbents, but the importance of transitioning underutilized spectrum to more efficient technology that can offer new capabilities and functionalities to users. Rejecting even an investigation of this spectrum opportunity as urged by CIC, and declining to examine whether this 5/5 MHz allocation below 1 GHz could be put to more efficient use without testing the claims (disputed by EWA/PDV) that the band bifurcation proposed would result in intolerable interference to incumbent systems, is contrary to the express language of the FCC's National Broadband Plan:

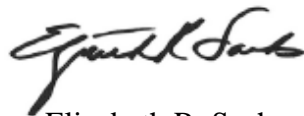
The FCC has a number of tools at its disposal to make spectrum usable for broadband, including changing allocations and modifying service, technical and auction rules. For some bands, reallocation may be the appropriate action. However, for others, reallocation may not be practical given international agreements and other constraints. In these situations, making spectrum available for broadband means taking steps appropriate to the specific circumstances of individual bands. It means working within the authority of the FCC or NTIA to remove legacy constraints that limit the usefulness of a band for appropriate broadband services and applications.<sup>2</sup>

EWA/PDV urge the FCC to commence a proceeding to consider the optimal use of the 900 MHz band and evaluate the technical and other considerations that arise in any band repurposing. If the FCC concludes that the public interest supports a band realignment, and if the CII community rejects the opportunity for priority access, no such encumbrance need be imposed, and the PEBB will utilize its spectrum to provide an additional broadband option focused on the specialized needs of all enterprise users. Encouraging additional competition and innovation is essential in assuring future investments in technology and spectrum.

This letter is being filed electronically, in accordance with Section 1.1206(b) of the Commission's Rules, 47 C.F.R. § 1.1206(b), for inclusion in the record in this proceeding.

Kindly refer any questions or correspondence regarding this matter to the undersigned.

Very truly yours,



Elizabeth R. Sachs

cc: FCC Chairman Tom Wheeler (via e-mail)  
FCC Commissioner Mignon Clyburn (via e-mail)  
FCC Commissioner Jessica Rosenworcel (via e-mail)  
FCC Commissioner Ajit Pai (via e-mail)  
FCC Commissioner Michael O'Rielly (via e-mail)

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<sup>2</sup> Federal Communications Commission, *Connecting America: The National Broadband Plan* (March 17, 2010), Chapter 5.4, Recommendation 5.8 at 85, available from: <http://www.broadband.gov/plan/>.

**USE OF 900 MHz SPECTRUM FOR  
CRITICAL COMMUNICATIONS**

- This band, like all spectrum allocated for business/industrial land mobile use, supports a variety of applications, including systems involving critical operations. Some of those systems are operated by entities classified as CII; others are deployed by non-CII entities that nonetheless provide vital services to the American public.
- The rebanding of over 2,000 800 MHz systems, including some 1,000 public safety systems dedicated to mission-critical services, demonstrates that with proper planning frequency realignments can be accomplished without compromising ongoing operations. A 900 MHz realignment is considerably less complex than 800 MHz, both because of the much smaller incumbent base (only approximately 400 incumbent systems, and likely a smaller number of operational systems, requiring realignment at 900 MHz) and because all 900 MHz equipment is capable of being retuned to other 900 MHz frequencies, thus avoiding the need to replace equipment.
- The technical information filed by EWA/PDV explains that exceptionally stringent filtering of the broadband system will strictly limit the potential for interference to systems operating in adjacent bands. Nonetheless, the proposal also recommends provisions to address the possibility of post-realignment interference with FCC-defined standards determining incumbents' rights to correction of claimed interference. This same model was adopted and has been used by the FCC for mission-critical 800 MHz public safety systems.

## **THE EWA/PDF PROPOSAL IS A BROADBAND SOLUTION FOR ENTERPRISE USERS**

- The 900 MHz band may “function well” for incumbents in the band and in the immediately adjacent NPCS allocation at 901/940 MHz, but that is because the band is significantly underutilized. If it were deployed as robustly as the current rules permit, the impact on incumbents would exceed the impact of an adjacent LTE allocation. The public interest in seeing spectrum used intensively and in introducing more efficient technologies is not served by maintaining the status quo.
- If secondary market transactions alone were sufficient to support the introduction of more advanced technologies, the FCC would never need to initiate proceedings to repurpose spectrum. PDV is pursuing secondary market transactions and has concluded purchases and frequency exchanges with certain licensees, including a frequency swap with a very large CII entity that now is operating exclusively on channels in the proposed 2X2 MHz allocation. However, a band repurposing requires regulatory action as well.
- The proposal was always identified as creating a broadband choice for CII entities, not an obligation. If certain CII entities believe their broadband needs will be better served elsewhere, non-CII business enterprise users will have a commercial broadband opportunity designed to address their specialized requirements.
- The FCC has repurposed multiple encumbered bands without assuming any coordination role at all beyond establishing the ground rules, such as defining comparable facilities. No greater involvement is proposed or needed at 900 MHz.

## **INTERFERENCE CLAIMS**

- During the more than 20 months that this proposal has been under consideration, EWA/PDV have submitted technical information that indicates no harmful interference is expected to result from the proposed broadband allocation. The CIC basis for claiming that harmful interference will occur is not identified, but that is precisely the type of issue that requires investigation by the FCC so that it can reach its own conclusion based on the technical evidence already on file, any additional information it requires, and its own expertise.
- EWA/PDV do recognize that underutilization of the band has resulted in a relatively low noise floor environment. The issue is whether incumbents are expected to deploy systems that would operate adequately if the band were utilized fully under the existing rules.
- The proposal, like virtually all repurposing of encumbered spectrum, would require that incumbents receive fully comparable facilities, with costs paid by the PEBB licensee, and would be able to continue to operate at their current service levels. There is an extensive body of experience with 800 MHz public safety systems that, based on ULS database information, are larger and more complex than the 900 MHz systems. That experience confirms that comparability can be achieved. As in other spectrum repurposing, if it is not possible to provide an incumbent with comparable facilities, that system will not be realigned and will be entitled to protection under the current rules.

## COST ESTIMATES

- EWA/PDV have not submitted a cost estimate as the cost will be determined by the number of systems that require realignment and the amount of equipment that needs to be touched, neither of which can be determined from the ULS database. Some incumbents appear to believe that EWA/PDV have suggested that realignment could be accomplished for an aggregate cost of \$50 per mobile. That is not correct. What has been suggested, based on the retuning of over 2,000,000 800 MHz radios, is that the average cost of programming a mobile or portable to operate on different frequencies is likely to be \$50. That is only one of the many costs for which the PEBB licensee would be responsible, including the cost of reconfiguring infrastructure, project management, engineering support, and all other costs reasonably incurred by an incumbent.
- The FCC determined that public safety licensees at 800 MHz would be entitled to no more than five years of increased operating expenses should such expenses be the result of rebanding. EWA/PDV do not agree that permanent, additional infrastructure will be required to provide incumbents with fully comparable facilities, and no such facilities were needed for rebanded 800 MHz systems. If they are proven to be necessary, incumbents would be entitled to identical treatment as the FCC afforded rebanded 800 MHz public safety licensees.
- Since the proposal specifically mandates the provision of fully comparable facilities, the claim that the technical rules would effectively preclude the delivery of comparable functionality is difficult to understand.

## **THE EWA/PDV PROPOSAL IS FEASIBLE**

- The FCC has authorized and parties have implemented the relocation of incumbents within a band and to other bands on multiple occasions. There is no basis in the record to conclude that the 900 MHz band presents unique technical, operational, or financial challenges that would prevent a successful realignment.
- It is not possible to present a detailed migration plan without knowing which incumbent systems will be relocated, since some may choose to migrate to broadband or enter into a different arrangement with the PEBB licensee, and then obtaining more granular data about those system operations rather than relying on the ULS database information. The FCC presumably recognizes this and has never required that such a plan be provided by a repurposing proponent. However, EWA/PDV have developed detailed frequency plans confirming the ability to provide comparable replacement frequencies for incumbents in some of the more congested markets, including some CIC members, and is prepared to submit them in the next phase of this proceeding or upon an earlier request from the FCC.
- The replacement frequency analyses referenced above are for some of the largest incumbent systems in this band.
- EWA/PDV endorsed API's recommendation that the PEBB licensee provide a substantial service showing on an MTA basis at the end of 10 years, a standard similar to many other services licensed on a geographic basis.

February 27, 2014

Mr. Roger C. Sherman  
Acting Chief  
Wireless Telecommunications Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: Private Land Mobile Broadband 900 MHz Spectrum Initiative

Dear Mr. Sherman:

The collective memberships of the undersigned organizations represent the overwhelming majority of critical infrastructure, other industrial, transportation, and business (Private Enterprise) licensees. As the Commission is aware, access to spectrum capable of meeting these members' internal broadband communications requirements is essential if they are to continue supporting America's economic growth, expanded employment, public well-being, the delivery of critical goods and services, security, and workforce safety. We believe that many of those particular, geographically specific needs can best be served through reorganization of spectrum already allocated under Part 90 to and used by Private Enterprise and Specialized Mobile Radio (SMR) service entities, a reorganization that will require a temporary freeze of this allocation as described herein.

The 900 MHz spectrum is a 5/5 MHz band where 199 12.5 kHz paired channels have been allocated for use by Industrial/Business (I/B) licensees and 200 12.5 kHz paired channels have been allocated for SMR service licensees, with Sprint Corporation (Sprint) being the predominant licensee in both the I/B and SMR portions of the band. Led by Morgan O'Brien, founder of Nextel Communications, Inc., and in collaboration with the undersigned industry associations, and manufacturers, meaningful discussions are being held to create a "900 MHz Private Land Mobile Broadband" ("PLM BB") initiative, define an inclusive management structure for the undertaking, and secure needed investment capital. A broader "Working Group" of interested organizations and licensees is being convened to develop spectrum plans for both a 2/2 MHz 900 MHz block that will continue to support Private Enterprise voice and data communication systems in use today and a 3/3 MHz contiguous block of spectrum on which an LTE-based PLM BB network may be configured and deployed to serve the unique needs of Private Enterprise, in particular CII, entities.



It is anticipated, consistent with prior instances in which new technologies have been introduced into an existing band, that the PLM BB licensee entity would fund, as necessary, the costs to migrate licensees to the 2/2 MHz portion of the band reserved for private internal communication uses if they do not wish to join the PLM BB network.

Time is needed in order that the parties may develop a plan for the PLM BB initiative in concert with the Commission and stakeholders. During this critical development phase, it is necessary to maintain, to the maximum extent possible, the current spectrum environment so that private internal communications may continue to be supported while the PLM BB plan is developed.

With that in mind, we seek the FCC's support to implement a six-month licensing freeze on applications from entities that do not already hold a 900 MHz license in the market requested. Under this approach, current 900 MHz licensees would be permitted to expand geographic coverage or channel capacity to serve ongoing business communication requirements while the PLM BB plan is more fully defined. New applicants, however, would be prohibited.

Introducing broadband capability to the 900 MHz band will be complicated but is absolutely necessary if Private Enterprise - in particular critical infrastructure industries - broadband interests are to be met. Recognizing the difficulty of securing adequate "green space" spectrum even for these vital communications needs, this vision does not require a reallocation of spectrum. Rather, it will allow incumbent licensees the opportunity to reorganize and introduce a new technology in a band that is already allocated for their use. We see this as a unique spectrum approach that will provide the benefits of broadband technology tailored uniquely to member requirements. However, in recognition of the complexity of developing and implementing the PLM BB initiative, the undersigned stakeholders emphasize that by submitting this request for a freeze, they are not under an obligation to agree to a plan and may individually withdraw from development and/or support of the plan and the freeze.

We seek the FCC's assistance and cooperation first by implementing a "light application freeze" for which there is substantial precedent. To that end, we would appreciate the opportunity to meet with the FCC's leadership to answer questions and secure the agency's guidance regarding this spectrum development opportunity.

We look forward to hearing from you.

Sincerely,

/s/ **James Crandall**

James Crandall  
American Petroleum Institute

/s/ **Mark E. Crosby**

Mark E. Crosby  
Enterprise Wireless Alliance

/s/ **Connie Durcsak**

Connie Durcsak  
Utilities Telecom Council

cc: Tom Wheeler, Chairman  
Mignon Clyburn, Commissioner  
Jessica Rosenworcel, Commissioner  
Ajit Pai, Commissioner  
Michael O'Rielly, Commissioner

William Jenkins, Sprint  
Morgan O'Brien